

**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>FP18191</b>	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).
International Application No. <b>PCT/AU2003/000979</b>	International Filing Date (day/month/year) <b>31 July 2003</b>	Priority Date (day/month/year) <b>31 July 2002</b>
International Patent Classification (IPC) or national classification and IPC <b>Int. Cl.<sup>7</sup> G06F 17/60, 17/30</b>		
Applicant <b>AVOLUTION PTY LTD et al</b>		

1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.																								
2.	This REPORT consists of a total of <b>5</b> sheets, including this cover sheet. <input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of <b>9</b> sheet(s).																								
3.	This report contains indications relating to the following items: <table style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 5%; text-align: center;">I</td> <td style="width: 5%; text-align: center;"><input checked="" type="checkbox"/></td> <td>Basis of the report</td> </tr> <tr> <td style="text-align: center;">II</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>Priority</td> </tr> <tr> <td style="text-align: center;">III</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;">IV</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;">V</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;">VI</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;">VII</td> <td style="text-align: center;"><input type="checkbox"/></td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;">VIII</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Certain observations on the international application</td> </tr> </table>	I	<input checked="" type="checkbox"/>	Basis of the report	II	<input type="checkbox"/>	Priority	III	<input type="checkbox"/>	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	IV	<input checked="" type="checkbox"/>	Lack of unity of invention	V	<input checked="" type="checkbox"/>	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	VI	<input type="checkbox"/>	Certain documents cited	VII	<input type="checkbox"/>	Certain defects in the international application	VIII	<input checked="" type="checkbox"/>	Certain observations on the international application
I	<input checked="" type="checkbox"/>	Basis of the report																							
II	<input type="checkbox"/>	Priority																							
III	<input type="checkbox"/>	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability																							
IV	<input checked="" type="checkbox"/>	Lack of unity of invention																							
V	<input checked="" type="checkbox"/>	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																							
VI	<input type="checkbox"/>	Certain documents cited																							
VII	<input type="checkbox"/>	Certain defects in the international application																							
VIII	<input checked="" type="checkbox"/>	Certain observations on the international application																							

Date of submission of the demand <b>24 February 2004</b>	Date of completion of the report <b>9 November 2004</b>
Name and mailing address of the IPEA/AU <b>AUSTRALIAN PATENT OFFICE</b> <b>PO BOX 200, WODEN ACT 2606, AUSTRALIA</b> E-mail address: <b>pct@ipaaustralia.gov.au</b> Facsimile No. <b>(02) 6285 3929</b>	Authorized Officer  <b>MATTHEW HOLLINGWORTH</b> Telephone No. <b>(02) 6283 2024</b>

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/AU03/00979

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>		
Int. Cl. 7: G06F 17/60, 17/50		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) USPTO, DWPI (IPC: G06F, information system, computer system, architecture, performance, model, business, etc.)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/0049573 A1 (ABU EL ATA), 25 April 2002 the whole document	1, 35, 66, 72
X	Item 3 Invests to Commercialise ABACUS (Avolution Press Release), 13 February 2002 <a href="http://www.avolution.com.au/about/media/detailed/main/releases/item_3_invest.htm">http://www.avolution.com.au/about/media/detailed/main/releases/item_3_invest.htm</a> section entitled "The ABACUS Product Suite"	1, 35, 66, 72
X	US 6,311,144 B1 (ABU EL ATA), 30 October 2001 the whole document	1, 35, 66, 72
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
<p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&amp;" document member of the same patent family</p>		
Date of the actual completion of the international search 19 August 2003		Date of mailing of the international search report 13 OCT 2003
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929		Authorized officer  M. D. HOLLINGWORTH Telephone No: (02) 6283 2024

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU03/00979

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 91/17494 A1 (BACHMAN INFORMATION SYSTEMS), 14 November 1991 the whole document	1, 35, 66, 72
X	WO 98/53399 A2 (BRITISH TELECOMMUNICATIONS PLC), 26 November 1998 the whole document	1, 35, 66, 72
X	US 5,276,877 A (FRIEDRICH et al), 4 January 1994 the whole document	1, 35, 66, 72

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU03/00979

### Supplemental Box

(To be used when the space in any of Boxes I to VIII is not sufficient)

#### Continuation of Box No: II

The international application does not comply with the requirements of unity of invention, because it does not relate to one invention or to a group of inventions so linked as to form a single general inventive concept. In coming to this conclusion, the International Searching Authority has found that there are three inventions:

1. Independent claims 1, 35, 66 and 72, and claims appended thereto. These claims are directed to methods and an apparatus for analysing systems. It is considered that the evaluation of a system's architecture in terms of non-functional requirements constitutes a first "special technical feature."
2. Independent claim 29, and claims appended thereto, directed to an architectural model of a complex system. In this claim, the only feature which can be identified as a "special technical feature" is the use of Components and Connections in the architectural model.
3. Independent claim 33, and claims appended thereto, directed to a means for obtaining architectural information about a system. The use of an interface enabling the input of architectural information is considered to be a third "special technical feature."

The above groups of claims do share the concept of an architectural model of a system, however this feature is generic and cannot be considered to constitute a "special technical feature." Since no other feature is common to all the claims, they lack unity, *a priori*.

Please note that there are inconsistencies in the dependencies of the claims. (Some examples include: claims 11, 36, 37, which are appended to themselves; claims 67 and 68, each of which is appended to the other; and apparatus claim 28, which is appended to claim 29 for an architectural model. It appears that the numbering of the claims has been befuddled.) As a result, it has only been possible to list the independent claims which correspond to different inventions.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU03/00979

## Box I Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos :  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos :  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3. ☐ Claims Nos :  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

## Box II Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See extra sheet.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  
Independent claims 1, 35, 66 and 72, and claims appended thereto.

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU03/00979

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report				Patent Family Member			
US	2002049573	AU	8690701	CA	2419153	EP	1314106
		WO	0219148	US	6311144	US	6560569
US	6311144	AU	8690701	CA	2419153	EP	1314106
		US	2002049573	WO	0219148	US	6560569
WO	9117494	CA	2081546	EP	0531319	US	5146591
		US	5179698	US	5193182	US	5193183
		US	5195178	US	5212771	US	5241645
		US	5249300				
WO	9853399	AU	7346698	EP	0983547		
US	5276877	CA	2047573	DE	4134419	FR	2668271
		GB	2250111	JP	4299414		
END OF ANNEX							

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/AU2003/000979

**I. Basis of the report**

**1. With regard to the elements of the international application:\***

☐ the international application as originally filed.

☒ the description, pages 1-55, as originally filed,

pages , filed with the demand,

pages , received on with the letter of

☒ the claims, pages , as originally filed,

pages , as amended (together with any statement) under Article 19,

pages , filed with the demand,

pages 56-64, received on 12 February 2004 with the letter of 11 February 2004

☒ the drawings, pages 1-33, as originally filed,

pages , filed with the demand,

pages , received on with the letter of

☐ the sequence listing part of the description:

pages , as originally filed

pages , filed with the demand

pages , received on with the letter of

**2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.**

These elements were available or furnished to this Authority in the following language which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

**3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:**

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

**4. ☐ The amendments have resulted in the cancellation of:**

☐ the description, pages

☐ the claims, Nos.

☐ the drawings, sheets/fig.

**5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\***

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

**IV. Lack of unity of invention**

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☒ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

The international application does not comply with the requirements of unity of invention, because it does not relate to one invention or to a group of inventions so linked as to form a single general inventive concept. In coming to this conclusion, the International Searching Authority has found that there are three inventions:

1. Independent claims 1, 35, 66 and 72, and claims appended thereto. These claims are directed to methods and an apparatus for analysing systems. It is considered that the evaluation of a system's architecture in terms of non-functional requirements constitutes a first "special technical feature."
2. Independent claim 29, and claims appended thereto, directed to an architectural model of a complex system. In this claim, the only feature which can be identified as a "special technical feature" is the use of Components and Connections in the architectural model.
3. Independent claim 33, and claims appended thereto, directed to a means for obtaining architectural information about a system. The use of an interface enabling the input of architectural information is considered to be a third "special technical feature."

The above groups of claims do share the concept of an architectural model of a system, however this feature is generic and cannot be considered to constitute a "special technical feature." Since no other feature is common to all the claims, they lack unity.

Please note that there are inconsistencies in the dependencies of the claims. (Some examples include: claims 11, 36, 37, which are appended to themselves; claims 67 and 68, each of which is appended to the other; and apparatus claim 28, which is appended to claim 29 for an architectural model. It appears that the numbering of the claims has been befuddled.) As a result, I have only been able to list the independent claims which correspond to different inventions.

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☐ all parts.
- ☒ the parts relating to claims Nos. 1-30, 37-75



**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims 6-18, 20-30, 41-45, 47-55, 57-59, 69-73	YES
	Claims 1-5, 19, 37-40, 46, 56, 60-68, 74-75	NO
Inventive step (IS)	Claims	YES
	Claims 1-30, 37-75	NO
Industrial applicability (IA)	Claims 1-30, 37-75	YES
	Claims	NO

**2. Citations and explanations (Rule 70.7)**

- D1: US 2002/0049573 A1 (ABU EL ATA), 25 April 2002
- D2: *Item3 Invests to Commercialise ABACUS* (Avolution Press Release), 13 February 2002  
[http://www.avolution.com.au/about/media/detailed/main/releases/item\\_3\\_invest.htm](http://www.avolution.com.au/about/media/detailed/main/releases/item_3_invest.htm)
- D3: US 6,311,144 B1 (ABU EL ATA), 30 October 2001
- D4: WO 91/17494 A1 (BACHMAN INFORMATION SYSTEMS), 14 November 1991
- D5: WO 98/53399 A2 (BRITISH TELECOMMUNICATIONS PLC), 26 November 1998
- D6: US 5,276,877 A (FRIEDRICH et al), 4 January 1994

**NOVELTY (N) claims 1-5, 19, 37-40, 46, 56, 60-68, 74-75**

Claims 1-4, 37-38, 40 and 60-68: These claims are not novel when compared to each of documents D1-D6.

Claims 5, 19, 46, 56 and 74-75: D1 and D4 disclose all the features of these claims.

Claim 39: D2 discloses all the features of this claim.

**INVENTIVE STEP (IS) claims 1-30, 37-75**

Claims 1-5, 19, 37-40, 46, 56, 60-68 and 74-75: As above.

Claims 1-75: The dependent claims are seen to define features which are either generic or well known in the art. As such, when the features are not disclosed in any of the citations, they are not seen to confer inventive step to the claimed invention in light of that citation.

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 71 is not clear because it is appended incorrectly. It claims a method, yet is appended to claim 67, which defines a computer-readable medium. The claim also refers to a "step of providing a plurality of levels of architecture information," a method step not found in claims 67 and 68.